

RESTORATION OF PEREGRINE FALCONS  
TO WISCONSIN - 1989

by Charlene M. Gieck

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SUMMARY

Only one pair of adult peregrine falcons returned to the Mississippi River historical nest sites. This pair disappeared suddenly in May. Plucked feathers from the adult male were found below the nest cliff. It appears that predation is the cause of death for the male; the female probably abandoned the site after his death.

Nine peregrine chicks were received for release in Madison. One bird died, two have disappeared, and six remain flying. A single peregrine was seen in Madison during the spring, but it does not appear to have remained in the area. The Madison hack site attendants report is attached.

The male from the 1988 pair returned to the Milwaukee hack/nest box. He attracted a one-year old female, from Isle Royale, and three eggs were produced. Only one egg hatched and a captive-raised chick was later added to the nest. The behavior of both adults was normal this year and both chicks fledged the nest. Unfortunately, the wild-produced young (female) was found dead in October - the cause unknown. The Milwaukee site attendant report is attached.

The program has again attracted much attention from the general public and has proven to be a good educational mechanism.

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Study 212: RESTORATION OF PEREGRINE FALCONS TO WISCONSIN

PERFORMANCE REPORT  
1 July 1988 to 30 June 1989

SUMMARY

Only one pair of adult peregrines returned to the Mississippi River historical nest sites. This pair disappeared suddenly in May. Plucked feathers from the adult male were found below the nest cliff. It appears that predation is the cause of death for the male; the female probably abandoned the site after his death.

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RECOMMENDATIONS

A stable and long-term funding source is desperately needed. The 1989 releases were made possible only from last minute funding by Pittman-Robertson Federal Aid. The outlook for 1990 is again grim, with only \$6,800 allotted from the Endangered Resources Fund for purchase of chicks and management.

It is unlikely that peregrines will be able to establish themselves in their historic nesting sites without adequate funding for management and protection.

The focus for release sites has been to use cities. These release sites are safer from predators, but other problems can occur. The choice for future release sites is very slim - there are few tall (over 10 story) buildings in Wisconsin. The amount of liability coverage is always a long discussed issue before building owners allow us on the roof or ledge. Research should be conducted to determine the feasibility of establishing a tower release site in Wisconsin.

The release of peregrine chicks have been occurring at a rate of less than 75% of that recommended by the Recovery Plan (1987: 70%, 1988: 40% and 1989: 50%). Strong consideration should be given to additional releases past 1991.

Job 212.1 COORDINATE THE IMPLEMENTATION OF PEREGRINE  
FALCON RECOVERY PLAN

Objective:

To coordinate the activities required for recovery of peregrine falcons in Wisconsin.

Procedures:

The activities are outlined and described in the Wisconsin Peregrine Falcon Recovery Plan (Gieck 1987).

Findings:

The many activities needed to recover a species necessitate having one person oversee these activities to ensure their progress and completion. Charlene M. Gieck, Nongame Biologist, continued as the Peregrine Project Coordinator and has supervised and/or completed the following actions.

A state Recovery Team was formed in May 1988 with Department of Natural Resources (DNR) staff and outside experts. The Team is an advisory group and is responsible to 1) assist with implementation of the Recovery Plan, 2) address issues relating to predator control and 3) determine issues and actions relative to the management of peregrine falcons.

The December Recovery Team meeting produced the following approved recommendations: 1) allow the Milwaukee pair to proceed without human intervention. Eggs would not be removed from this nest to encourage the production of a second clutch of eggs; 2) prepare the Madison site as the major release site; 3) prepare a LaCrosse site as an alternate release site; 4) conduct management at the Mississippi nest sites including establishment of predator barriers, trapping and removal of predators and installation of signs to limit access to the bluffs. Vegetation removal and egg removal will not be conducted.

An informal newsletter, Peregrine Panorama, was printed and distributed to keep DNR staff and other interested persons informed of the status of the program. The mailing list contains approximately 240 people. Copies of the newsletters are attached.

Gieck attended the Regional Peregrine Symposium in Minnesota in April. Representatives from Midwest States gave reports on the status of their programs and goals were reaffirmed. Problems and ideas about peregrine projects were shared.

The Milwaukee release/nest site was chaotic during the summer of 1988. The unexpected arrival of two one-year old peregrines in Milwaukee was overshadowed by the even more unexpected production of two young. There had been no record of one-year old peregrines successfully producing young prior to this pair. Two captive raised young were added to the nest.

The parents were able to feed all the young and accepted the new arrivals as their own. The subadult male was a protective father and fed the young while they were perched, but would then attack them when they were in flight. One young died as it collided with a building, one was injured but released in Omaha and another was injured and died due to injuries. Only one of the young survived and remained in Milwaukee.

In preparation for 1989, legal agreements for the use of the box on the First Wisconsin Building were drafted and approved. A wall display and monitoring camera were installed in the building.

Throughout the winter two adults and an immature peregrine were seen in Milwaukee. In April "McArthur" and "Sibella" were in and out of the release/nest box on the First Wisconsin Center. McArthur is the male from last years pair. Sibella was another one-year old female released from Isle Royale in 1988. On May 6 the first of three eggs were laid. Only one egg hatched on June 12. On June 19 a captive raised young was added to the nest.

A site attendant was hired to watch the development of young and behavior of the adults. We hoped that the adult male would not repeat his behavior of last year.

Contaminant monitoring funding was not available to monitor problems that may exist in the peregrine's prey. The two unhatched eggs from the Milwaukee pair will be analyzed by the U.S. Fish and Wildlife Service this fall.

Updates of the program's progress were given to the media on an ongoing basis. Several talks detailing the program were given by Gieck to interest groups. The Fond du Lac County Audubon Society were especially active in promoting the project by selling peregrine T-shirts.

Volunteers were given certificates as a thank you for their involvement and time.

#### Job 212.2 PREPARE SITE-MANAGEMENT PLANS

##### Objective:

To prepare specific site-management plans for natural nest site locations.

##### Procedure:

Activity 1.2 as outlined and described in the Wisconsin Peregrine Falcon Recovery Plan (Gieck 1987).

Concise information sheets have been developed by the Eastern Peregrine Falcon Recovery Team for territories using a standardized format. These information sheets facilitate identification of future management needs on an individual territory basis. A ground check of each territory is required and the following information recorded:

1. Habitat type, prey availability, natural predators.
2. Identification of all roads, trails, and dwellings.
3. Recommendations to reduce disturbance factors.
4. Reproductive history.

##### Findings:

Site management plans were slated for for the Alma and Maiden Rock sites - two active nest sites between 1986-89.

A Mississippi River site management plan was obtained from Minnesota. Many of their management guidelines are suitable for the Wisconsin habitat on the Mississippi River and were incorporated into the Wisconsin plans.

Dr. Redig and associates surveyed and characterized the Mississippi River historical nest sites in 1975 using Eastern Recovery Team format. This information is basically the same and used in the management plans.

Both the Alma and Maiden Rock management plans are in draft form. Additional information is still being collected from other sources to be included in the plan. A final draft will be reviewed by the Wisconsin Recovery Team and other experts.

All specific location information will remain confidential.

#### Job 212.3 MANAGE NATURAL NEST SITES

##### Objective:

To survey historic sites for returning adults and provide management at nest sites to promote successful reproduction by peregrine falcons.

##### Procedures:

Activities 1.1 and 1.2 as outlined and described in the Wisconsin Peregrine Falcon Recovery Plan (Gieck 1987).

##### Findings:

The Nature Conservancy (TNC) has cooperated with the DNR to determine ownership of the historic sites. TNC hired a Registry Program intern for the summer to visit the sites and discuss management with the landowner. By joining the Registry Program, the landowner verbally agrees to protect the land and to notify TNC if changes occur. Usage of surrounding lands should be further researched.

A breeding survey of historic peregrine eyries was conducted with the help of the Minnesota and Wisconsin Falconers Associations and other volunteers. The survey occurred on April 22 and concentrated on the Mississippi River area. One pair of peregrines was located on Wisconsin side of the Mississippi River north of La Crosse. A single male peregrine was seen at a bluff on the Minnesota side. Other observations by the general public were investigated when appropriate.



The Alma site was not active in 1989, so no management occurred at this site. The lack of funding prevented management to enhance the site.

Along the Mississippi River, volunteers monitored the activities of the adult birds at the historic nest site. Signs informing climbers and hikers of the presence of peregrines were posted at the base of the Maiden Rock site to discourage disturbing the birds. Arrangements were made with Minnesota to band the young. Tree clearing on the bluff face was not possible as the land is privately owned and the owners refused to allow tree cutting. Predator control was not utilized due to negative response in past years and the belief that the natural nest hole in the cliff face seemed protective enough.

Prey in the form of shorebirds and waterfowl are abundant in these areas, so that further enhancement of prey is not necessary.

The pair of peregrines disappeared abruptly from the Maiden Rock site in mid-April. After exploring the site, feathers from the adult male were found. Tissue was still connected to the plucked feathers and it is likely that a great horned owl killed the male. The female was not seen after this time.

#### Job 212.4 PREPARE ANNUAL REPORT

##### Objective:

To prepare an annual report in summary of the project's activities.

##### Procedures:

Part of activity 4 of the Recovery Plan to maintain communication. The activities completed or in progress are summarized here. Copies of this report will be sent to interested persons.

##### Findings

The report was completed.

#### Job 212.5: ACQUIRE PEREGRINE EGGS

##### Objective:

To obtain and release young peregrines to the wild in a process called "hacking".

Procedures:

Activity 2 as outlined and described in the Wisconsin Peregrine Falcon Recovery Plan (Gieck 1987).

Findings:

Six peregrine falcon chicks successfully fledged from the Madison release site in 1988.

A single peregrine was seen in Madison in April 1989. It did not establish a nest site.

An agreement between the DNR and University of Wisconsin was completed for the Madison release site. The hack box from last year was destroyed on May 24 by a wind storm. The Oakhill Correctional Institute provided the labor to construct a new box.

Nine peregrine chicks were purchased from The Nature Conservancy - Minnesota. Food (coturnix quail) for the peregrines was obtained from the closest source.

Two intern students (Leanne Eis and Rebecca Taylor) were hired as the hack site attendants. They began work at the end of June. Once the peregrines arrived, the attendants fed and monitored the activities of the birds on a daily basis. The hacking procedures are detailed in Sherrod et al (1982).

Five peregrines arrived at the Madison release site on June 30. One of these was discovered to be very emaciated and depressed on July 7. The bird died later that day and the likely diagnosis is viral infection. The other four were released on July 9. Several tried their first flights that same day. One of these birds flew several blocks away from the hack box, was gone for two days, reappeared and then disappeared. The outcome of this bird is unknown.

Four more peregrines arrived on July 19. These were released on July 23. Only one flew the day of release, the others attempted flight within a few days.

The first arrivals mildly harrassed the new arrivals, but no injuries occurred. The birds should continue to visit the site for food for 3-5 weeks. Several of the birds have been seen chasing pigeons and bugs.

All birds were banded with U.S. Fish and Wildlife Service leg bands and anodized black and white bands from Minnesota. The bird's wings were also color marked with spray paint to aid in identification while in flight.



The media was invited to view the birds on their day of arrival. Informational displays were placed at the First Wisconsin Bank-Madison and the DNR information desk.

Action was taken to establish an alternate release site for 1989. The legal agreement was drafted, but a compromise was not reached before the field season began. Hopefully, the agreement can be completed this winter.

Volunteers were trained and used as available.

#### LITERATURE CITED

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Prepared by: Charlene M. Gieck  
Nongame Biologist

Madison's Peregrines

Arrived 6/30/89; Released 7/9/89:

Houdini

ID Mark: one orange dot, left wing  
Sex: female  
Hatch Date: 23 May 1989  
Breeder/breeder location: Hardaswick/South Dakota

Levi

ID Mark: one orange dot, right wing  
Sex: male  
Hatch Date: 25 May 1989  
Breeder/breeder location: Hardaswick/South Dakota

Tasmanian Devil (Tas)

ID Mark: one green dot, right wing  
Sex: male  
Hatch Date: 23 May 1989  
Breeder/breeder location: Hardaswick/South Dakota

Foghorn Leghorn (Foggy)

ID Mark: one green dot, left wing  
Sex: female  
Hatch Date: 25 May 1989  
Breeder/breeder location: Hardaswick/South Dakota

Arrived 7/19/89; Released 7/23/89:

Calvin

ID Mark: two pink dots, right wing  
Sex: male  
Hatch Date: 11 June 1989  
Breeder/breeder location: Oliphant/Saskatchewan

Laura

ID Mark: one pink dot, left wing  
Sex: female  
Hatch Date: 11 June 1989  
Breeder/breeder location: Paleroni/Nevada

Chipper

ID Mark: one orange dot, back  
Sex: female  
Hatch Date: 12 June 1989  
Breeder/breeder location: Paleroni/Nevada

Big Bertha

ID Mark: one green dot, back  
Sex: female  
Hatch Date: 10 June 1989  
Breeder/breeder location: Rogers



PEREGRINE FALCON RELEASE AT MADISON, WISCONSIN  
1989

Personnel at Hack Site

Leanne Eis, 517 W. Mifflin #3, Madison, WI 53703

Rebecca Taylor, 2016 Kendall Avenue, Madison, WI 53705

Site Description

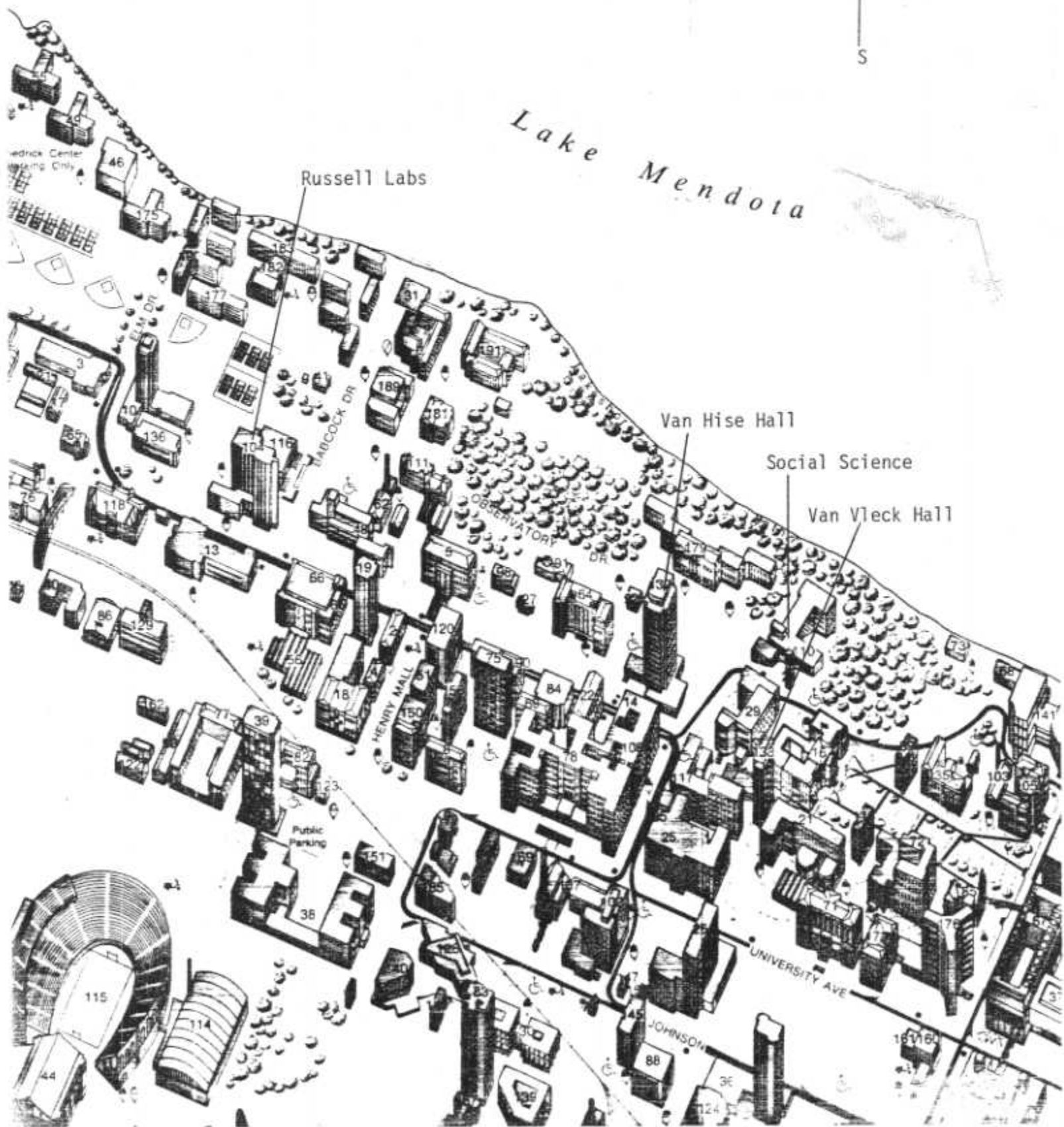
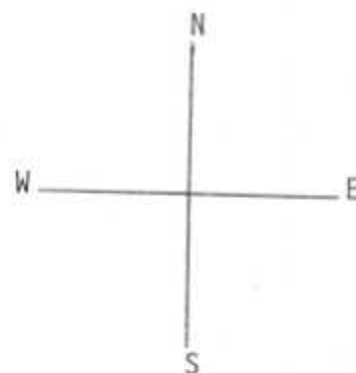
This south-central Wisconsin hack site is located on the University of Wisconsin-Madison campus. Since Van Hise is the tallest building in Madison it served nicely as the site for a hack box. Located only a few hundred yards from the south shore of Lake Mendota and about a mile from Lake Monona this site offers large open areas for the peregrine falcons (Falco peregrine) to develop and pursue prey. The tree cover along the shoreline of Lake Mendota provided habitat for prey species and some trees provided roosting areas. The campus buildings in the vicinity of Van Hise provided areas for the birds to roost. Van Vleck Hall, south east of Van Hise, was used as an observation post to monitor the birds' activities.

The hack box was placed on the north edge of Van Hise overlooking the lake. Due to lack of a wide ledge where the birds could acclimate to their new surroundings without accidentally falling, it was decided to open the small door on the east side of the hack box rather than to remove the screen and bars from the north face of the box. Additionally, This prevented any birds from bolting when the hide was initially opened. It also allowed the birds to walk around the roof, feed on the coturnix quail (Coturnix coturnix) provided, and then move to the ledge when ready. The front panel of the box was removed after all the birds were released.

It is hoped that a pair of peregrines will return to the release area in the future. It may be more likely that returning peregrines would utilize historic eyries along the Wisconsin River, Mississippi River, or Devil's Lake State Park. Repeat releases from this site are being considered if no falcons return.



Figure 1. University of Wisconsin - Madison  
Buildings Involved in the 1988  
Madison Peregrine Falcon Release.



Pre-release History of Young

<u>Name</u>	<u>Sex</u>	<u>Breeder/Location</u>	<u>USFWS Band #</u>	<u>Project Band #</u>	<u>Hatch Date</u>
Houdini	F	Hardaswick/S. Dakota	9872024	P88P	5/23/89
Levi	M	Hardaswick/S. Dakota	81622135	Y93Y	5/25/89
Tasmanian Devil (Tas)	M	Hardaswick/S. Dakota	81622136	Y92Y	5/23/89
Foghorn Leghorn (Foggy)	F	Hardaswick/S. Dakota	98720825	P89P	5/25/89
*	M	Haak/Idaho	81622137	Y85Y	
Calvin	M	Oliphant/Saskatchewan	81622147	48T48	6/11/89
Laura	F	Paleroni/Oregon	98720817	P90P	6/11/89
Chipper	F	Paleroni/Oregon	98720907	P94P	6/12/89
Big Bertha	F	Rogers/	98720908	P95P	6/10/89

\* Died on July 7, 1989

Release Data

<u>Name</u>	<u>Placed in Hack Box</u>	<u>Released</u>	<u>Color Marks</u>
Houdini	6/30/89	7/9/89	Orange - Left Wing
Levi	6/30/89	7/9/89	Orange - Rt. Wing
Tasmanian Devil	6/30/89	7/9/89	Green - Right Wing
Foghorn Leghorn	6/30/89	7/9/89	Green - Left Wing
Calvin	7/19/89	7/23/89	2-Pink - Rt. Wing
Laura	7/19/89	7/23/89	Pink - Left Wing
Chipper	7/19/89	7/23/89	Orange - Back
Big Bertha	7/19/89	7/23/89	Green - Back

### Pre-release Details of Young

On the mornings of June 30, 1989 and July 19, 1989, 5 and 4 peregrine falcons, respectively, arrived safely in Madison with the help of Dr. Stanley Temple, a member of the Wisconsin Peregrine Recovery Team and advisor to the recovery project. The falcons, which had already been banded and color marked on arrival, were then placed in the hack box following a short press conference.

The falcons were kept in the hack box for approximately 5-8 days, depending upon their age, during which time they were becoming fully-feathered and accustomed to their new surroundings. During this time, a schedule was followed in which the falcons were given food in the early morning using a delayed feeder mounted atop the box. In the late afternoons the box was opened and the quail remains were removed and a pan of water was placed inside the box. A pan of water was always provided and the falcons could be observed sitting in the pan during the hottest periods of the day. They could also be observed preening while sitting on the rocks which were provided for perching spots. They were seemingly unaware of the heat around them. While the falcons were in the box, breast feathers and wings were removed from the quail to reduce the amount of remains left in the box.

One unfortunate incident did occur before the falcons were released. One of the falcons didn't appear to react to our presence during feeding and cleaning sessions and, on further inspection, was found to be extremely sick. The peregrine was rushed to the Veterinarian Medicine Hospital Complex on the Madison campus where it later died. The necropsy showed the presence of aspergillosis-like lesions, bacteria and viral infections. Fortunately, the other falcons were unaffected. The hack box was thoroughly cleaned and disinfected before the arrival of the second group of falcons.

### Release Details

On the morning of July 9, 1989, the first group of peregrine falcons was released from Van Hise Hall. The day was very warm and sunny with a small amount of air movement. The hack box was opened, by means of a small door on the east side of the box, at approximately 9:15 AM. Ten quail were left tied to the hack board which was placed about 10 feet from the hack box. At 9:30 the first falcon, Tas, appeared on the ledge of Van Hise. By 10:30 all of the falcons were sitting on the east ledge of the building, stretching and flapping their wings in preparation for flight. Levi proved to be the most adventurous of the falcons, taking his first flight shortly after 10:30. He flew around Van Hise and attempted to perch on one of the window screens about half way down the building. He then continued his



journey to one of the lower ledges of Van Vleck Hall, where he spent most of the day recuperating. Houdini followed a few minutes later with her first flight attempt by flying around Van Hise and landing safely onto the north side of Van Hise. Observers had to wait until later that afternoon to watch Tas, at approximately 3:45 pm, fly to Medical Science Complex, south of Van Hise. All of the falcons were observed returning to the roof of Van Hise on the same day of their release. After returning to the roof, Houdini flew to the west side of campus where she disappeared for the evening. A search was started immediately, but there was no sign of her. Foggy waited a week to make her first flight after being knocked onto a lower ledge of Van Hise by the wind.

The second group of falcons were released on July 23, 1989. This day dawned with identical weather as the first release day. A second hack board was placed on Social Science Hall for an alternate feeding spot for the older falcons. The box was opened by the side door method again at 9:00 am. The falcons in this second release seemed to take a little more time to acclimate to their new found freedom before their first flight. Calvin took his first flight to Home Economics building, a few yards west of Van Hise, at approximately 2:30 pm. This was not a leisurely flight as one of the older birds was in hot pursuit. A few hours later Laura was accidentally knocked onto the lower ledge of Van Hise by one of the older birds. Previously, the falcons had been spending most of the day roosting on Van Vleck. They had obviously decided that it was time to investigate the situation on Van Hise. When the older birds came to Van Hise, the younger birds would start food begging.

Chipper was the second falcon to take her first flight. on July 24, 1989, Chipper flew to the Carillon Towers. Laura waited 4 days to make her first flight. Once again, all of the falcons made it back safely to the roof of Van Hise. Big Bertha was not observed taking her first flight.

All of the falcons had difficulty during their first few days in flight. There was a general period of awkward flights and clumsy landings, but the falcons quickly honed their flying skills.

#### Flight Development and Hunting Behavior

The peregrine's flying techniques evolved quite rapidly, with the males developing considerably faster than the females. After one week obvious improvement could be observed in flying techniques by increased complexity of flight patterns and distances traveled. There were several reported sightings of peregrines over Lake Monona and the coliseum, about 5 miles southeast of Van Hise. The younger falcons seemed to take a little longer in development, often intimidated by the falcons

from the first release. The older peregrines were observed chasing the newly released falcons around Van Hise. The majority of the non-flight time was spent on Van Hise and Van Vleck. Other roosting spots included Social Science Hall, Cancer Research building, Engineering Research building and trees, particularly a dead tree on the southern shore line of Lake Mendota.

Crabbing and aerial chases became more common as time passed. In accordance with the maturity of the falcons, their attentions soon turned to other items of chase, such as pigeons (Columbia livia), crows (Corvus brachyrhynchos), chimney swifts (Chaetura pelagica), common nighthawks (Chordeiles minor), and various types of insects. Although the stoops were aggressive at times, the first kill wasn't documented until August 1. A peregrine was spotted consuming a northern oriole (Icterus galbula) on the north shore of Lake Mendota. It was assumed that it was Levi, because he had been spotted in this vicinity the previous day.

The second kill of the summer was recorded the next day, August 2, when an unidentified falcon was spotted on campus eating a pigeon.

Although only two kills were directly observed, it was apparent that the falcons were obtaining food on their own, evidenced by the increased number of quail left uneaten. Crows were often observed flying away from Van Hise with quail in their talons, thus adding to the belief that the peregrines were spending less time around Van Hise.

### Casualties

We were fortunate to have avoided the deaths of any more peregrines following their release and subsequent dispersal. Unfortunately we did lose contact with two of the falcons immediately after their release. Houdini had disappeared in the late afternoon on the day of her release. On July 12, Houdini was located on the roof of the Cancer Research building, southwest of Van Hise. Her flight seemed strong and she appeared to be in good health. Food was placed onto the rooftop on which she was perching. Although she saw the quail being put out and spent most of the day and the following morning on that roof, she did not eat. She disappeared again at 11:30 am on July 13, 1989. Despite extensive searching, she couldn't be relocated.

As previously stated, Big Bertha was never observed taking her first flight. The paint on her back was extremely faint, even while in the hack box, and we thought it possible to actually be seeing the falcon, but not its color mark. On July 27 an entire day was spent observing from the roof of Van Hise. This enabled us to identify every bird when it returned to

the roof to eat. Every falcon was positively identified, except Big Bertha. Once again an extensive search was conducted, but to no avail.

We had two incidences which could have resulted in serious injury to the falcons involved. On July 22, Chipper crashed into the windows on the ninth story of Van Vleck, a few feet from a hack site attendant. Within seconds after her crash, Chipper picked herself up and flew off to the northwest, disappearing behind Van Hise. She flew well, and was apparently uninjured.

Another close call occurred on September 8, 1989, when Tas was reported to have flown into a power pole in the town of Middleton, located on the western edge of Madison. A concerned citizen immediately called the humane society, who in turn, contacted Dr. Stanley Temple. On further inspection by Dr. Temple, Tas seemed physically uninjured, although still a bit stunned from the crash. Tas was released again that evening, at 6:30 pm, from the hack box. Within 15 minutes, Tas was on the ledge in front of the box, apparently eating a quail. A half hour later he made a short, but steady flight to the roof of Van Vleck, where he seemed content to stay for the night. He was not spotted the next day by the attendants; hopefully he returned to the area in which he had previously been inhabiting.

#### Commentary

We were fortunate to be able to use the facilities on the University of Wisconsin-Madison campus for the release of peregrine falcons. The location allowed a large number of people to become exposed to the project. We appreciate the interest that was generated as programs such as this could not continue without public support.

The peregrine falcon program was considered a success even though three falcons were apparently lost. Six released falcons did survive up until a time when they dispersed. It wasn't long after their release that the falcons were easily moving between several buildings surrounding Van Hise. They also spent a lot of time flying over Lake Mendota and its shoreline. The peregrines also seemed to keep a schedule of returning to Van Hise to roost for the evening approximately a half hour before dusk.

As the falcons' hunting abilities developed, they became less dependent on the food source provided for them. Levi was the first falcon to leave the area, last spotted returning to Van Hise on August 5, 1989. The other falcons gradually began to disperse around the city, often making an appearance after several days. As of September 11, 1989, quail was still being placed on the hack board on Van Hise. At least one peregrine had been spotted returning to Van Hise for food. Although food was

still provided for the falcons, it was hard to tell how much of the quail was being eaten by the peregrines or the crows. The crows have approached the roof of Van Hise more aggressively with the increased dispersal of the falcons.

We had difficulty identifying individuals because the paint markings were not very visible after complete feather development. We recommend painting the birds the day of release not before arrival.

### Acknowledgements

Special thanks goes to the University of Wisconsin-Madison for the use of their facilities and to all the people associated with the University who aided and encouraged us in any way. Particular thanks go to Vice-president, Dave Martin, for his help in the initial formation of plans and continued assistance and excitement, Floyd Hall for his aid with technical aspects associated with the various buildings used, the custodial staffs, and the people of the Sheet Metal and Machine Shops and the Math Department. Also President Shaw, Vice-Chancellor Van Ess and Attorney Hodulik for their patience and assistance.

Dr. Stanley Temple deserves special thanks for his willingness and patience in helping with even the smallest problem. It is doubtful that the peregrine program in Wisconsin would be at the point it is without his help. Thanks also to his wife, Anita.

Thanks also to:

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peregrine.

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## **WISCONSIN PEREGRINE RECOVERY PROGRAM MILWAUKEE SITE REPORT**

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### SITE DESCRIPTION

Wisconsin's only known active peregrine falcon (*Falco peregrinus*) eyrie is located a ledge outside the 41st floor observation deck of the First Wisconsin Center, the tallest building in the state. The site was first used for hacking fourteen young falcons in 1987, and a hack box was mounted on the west side of the building for this purpose. In 1988 the hack box was occupied by a territorial pair of peregrines, who used the box as their nest site. This was the case, once again, in 1989. Observations were made via closed circuit television until fledging; thereafter from the roof of the 411 Building, a thirty-story building located two blocks west. Other nearby buildings used by the peregrines on a regular basis included: the Marshall and Ilsley bank, the antenna atop the First Financial Center, the old Federal building, the Wisconsin Gas Company building, City Hall, the Wisconsin Bell Telephone Company Building, the Cathedral of St. John the Evangelist, the 100 East building, the IBM building, the Pfister Hotel. (See Map)

Between the 1988 and 1989 nesting seasons, we modified the hack box to make it more appropriate for use by nesting falcons by adding an extension to the front. This addition allowed full access by the parents while keeping the chicks confined to the back of the box until they were steady on their feet. The extension also provided better footing and protection from the strong winds that are common at box level.

### NESTING ACTIVITY

Three peregrines, two adults and one juvenile, were seen regularly throughout the winter in the downtown area, often perching in the nest box. Although we were unable to obtain band numbers, the adults resembled the territorial pair that nested there in 1988 and we suspect that, with an abundance of food available, Madonna and McArthur wintered in the city. The juvenile was not color-marked, and thus was not the remaining chick fledged there the previous summer. Sometime in late February/early March, the adult female either left the area or died, and a subadult female, seen



frequenting downtown Milwaukee with McArthur (Y03Y), was identified as 20V20. She had been released the previous summer from Isle Royale, Michigan and, as she had not been named, we dubbed her Sibella.

Observations of the nest box via closed-circuit television revealed courtship behavior, including scraping--primarily by McArthur--from mid-March through May. Three eggs were laid at approximately two-day intervals beginning 6 May. Saturday, 10 May the overnight temperature dropped to 28° F. Incubation began after the third egg was laid, with both adults sharing in incubation.

Saturday, 8 June Sibella began refusing to allow McArthur to take his turn on the eggs and the morning of 10 June the first egg had hatched. Because the remaining eggs failed to hatch, the nest was augmented with one nine-day-old captive-produced chick on 19 June.

Sibella was very bold and refused to leave the nest box when we opened it to add the second chick and remove the adled eggs--in fact she actually came after us when we tried to reach toward the eggs. We decided not to press the issue and quickly slipped the new chick into the box and left the ledge. By the time we reached the monitor, she was already feeding the youngsters.

We banded the chicks 1 July. Again, Sibella was unwilling to leave the nest box until we dropped a dead bird through the food chute. She grabbed it and promptly left the box. When she saw us just outside, she became agitated and vocal, and flew back and forth in front of the box with the bird in her feet. The young captive-bred male (Fast Eddy) was very vocal and skittish, while the wild-hatched female (Sojourner) sat sedately, seemingly unconcerned by our approach. We removed the chicks as quickly as possible and placed them in a cardboard box for transport inside the building for banding. Although handled gently, the center and outside talons on Sojourner's right foot were bent and bleeding slightly when we removed her from the box. While we banded the youngsters, Sibella paced just outside the plate glass window. Before replacing the chicks, the adled eggs were removed from the box.

### FLEDGING

Fast Eddy developed much faster, both physically and behaviorially. He fledged early Friday, 21 July, spending much of the day in the First Wisconsin roof. He took only short flights, which elicited no response from

his parents. A flight mid-afternoon to the Gas Co. brought McArthur stooping quite aggressively but, unlike the previous summer, he never hit the youngster. Every subsequent flight that day brought harassment by McArthur, even though he also brought food to the chick.

Unlike 1988, the chicks were rarely stooped while perched, even when sitting on exposed ledges. Sibella was also quite aggressive, initially, stooping hard with her feet extended, but Eddy flipped up to meet her with his feet and she did not actually strike him. Fast Eddy handled the harassment quite well--he was a strong flier and, by the end of his second day in the air, he was learning to maneuver in the updrafts above the building and was often the instigator of dogfights with his parents.

Monday morning, 24 June, Sojourner fledged and was lost from sight. We received a call from the First Wisconsin Security about 6:00 p.m., saying one of our falcons was on the hood of an employee's car in the parking lot south of the Center and that the employee was anxious to leave. Apparently, Sojourner wouldn't get off of his car, even when he started it up and tried to pull out. Greg was able to walk right up to the youngster and she was recovered uninjured from the hood of the car.

Upon examining her for injuries, we found her center talon sheath bent but still attached; the outside talon sheath had been sloughed. Both talons showed new growth at the bases. She was returned to the nest box after dark.

Sojourner "refledged" early Wednesday, 26 July, circling the First Wisconsin Center several times that morning but never long enough to draw in McArthur or Sibella. At noon she was scared off the roof ledge by people on the roof, but she landed safely on the 41st floor ledge. At 2:00 p.m. she was scared off the building again, by an unauthorized person on the observation deck. She was sleeping on the gravel outside an east window when he startled her and she bolted off the building. She was next seen on the roof of a four-story building across the street to the east of the Center. We watched her from the Galleria until she flew to the roof of the parking structure to the south. The air was very humid, still, and heavy that day, and she was working hard to gain altitude. As she circled to the north side of the First Wisconsin Center, McArthur met her, stooping hard several times. He pulled up only just before hitting her, chasing her west up Wisconsin Ave. out of sight before we could reach the corner.

Heavy rain kept us off the roof until evening and we were unable to locate Sojourner until the following morning, when we spotted her on the

upper ledge of the old IBM Building. Later that morning she flew across the street to the Federal Building, where she spent the day. The next morning, 27 July, both chicks were on the Federal Building tower, with Sojourner inside a four-foot square cast iron railing we came to call "the playpen," and Fast Eddy sitting on the lip just outside the railing.

#### POST-FLEDGING ACTIVITY

Although most of the peregrine chicks we've had in Milwaukee since the recovery effort was initiated in 1987 have spent time in "the playpen," they all were able to find their way up and out within a few hours, including Fast Eddy. Sojourner, however, stayed in "the playpen" from Thursday, 27 July until Sunday, 30 July. During that time, both parents brought her food, and Fast Eddy would often bring food to the tower to eat, leaving leftovers that Sojourner would pull under the railing and eat.

We saw a youngster we believed to be Sojourner on several occasions after 30 July, but we were unable to verify her identification with band numbers. Her head was much lighter than Fast Eddy's, and she was much more honey-colored than the young male, who had a distinct grayish wash to his dark brown back and head. We also saw Fast Eddy quite regularly, although after Sojourner escaped "the playpen," all four resident falcons began ranging widely and were seen downtown less frequently.

The youngsters, especially the little male, were often seen dogfighting with their parents, and McArthur was never seen stooping the kids with such intensity as on 26 July again. The chicks' flying proficiency improved rapidly. Fast Eddy began stooping playfully at kestrels and other small birds beginning 24 July, his third day on the wing. He was trapped at Cedar Grove banding station on 3 September and released.

Sojourner was found dead atop a building at 210 East Wisconsin Ave. by building personnel in late October. They disposed of her remains before we were contacted so we were unable to determine the cause of death.

#### HUNTING ACTIVITY

McArthur has proven to be an excellent provider, and was seen hunting on numerous occasions. On 25 July he was seen catching 4 birds (3 of which were rock doves, the fourth unidentified) between 5:00 and dusk. Sibella also hunted for the family, and both parents were seen "team hunting" several times.

The bulk of the falcons' kills were rock doves, based on kill remains recovered, kills witnessed, and identification of feathers left in the nest box after the chicks had fledged. Prey species identified were (\*indicates one known occurrence):

*Black-billed cuckoo	<i>Coccyzus erythrophthalmus</i>
Blue jay	<i>Cyanocitta cristata</i>
*Blue-winged teal	<i>Anas discors</i>
Common flicker	<i>Colaptes auratus</i>
Chimney swift	<i>Chaetura pelagica</i>
*Grackle	<i>Quiscalus quiscula</i>
Mourning dove	<i>Zenaidura macroura</i>
*Northern oriole	<i>Icterus galbula</i>
Robin	<i>Turdus migratorius</i>
Rock dove	<i>Columba livia</i>
*Ruddy turnstone	<i>Arenaria interpres</i>
*Snipe	<i>Gallinago gallinago</i>
*Spotted sandpiper	<i>Actitis macularia</i>
Starling	<i>Sturnus vulgaris</i>
Yellow-billed cuckoo	<i>Coccyzus americanus</i>

#### DEFENSIVE BEHAVIOR

Both parents were much less defensive toward people approaching from inside the observation deck than the pair in 1988. It was not uncommon to see both birds perched on the nest box or 41st floor ledge, seemingly unconcerned by the people standing only a few feet away inside the glass. They were occasionally defensive toward workers on the roof or window washers. We were harassed on the ledge by McArthur once, and then only briefly before he lighted on the ledge down from us to watch.

Sibella, however, was very bold when we entered the nest box, usually refusing to leave. If we went too near the chicks or eggs, she would come after us, making removal of the chicks for banding and the addled eggs much more interesting.

Once the chicks had fledged, the parents would attempt to either force the chicks off buildings where people were working/observing or, if this failed, would harass the people. McArthur would stoop repeatedly, while Sibella would make a line-drive flight toward the person's head.

The pair was less tolerant of raptorial intruders. According to workers at a local wildlife rehabilitation center, they had received a great-horned owl on 23 May that had been rescued by a fisherman after McArthur knocked it into Lake Michigan. According to eyewitness accounts, the owl had been driven to take cover under the lakefront amphitheater earlier that day by the falcon, and when it attempted to leave, it was struck repeatedly until it hit the water. The owl was rehabilitated and later released away from the downtown area.

26 July we heard screams above the 411 building and looked up to see both adults stooping a red-tailed hawk. It was able to flip over and meet each stoop with its feet raised. The falcons drove it north along the lakeshore and out of sight.

12 September an adult female peregrine with a red band on its right leg and a narrow black band on its left was spotted near the Milwaukee Public Museum. When the resident pair discovered her, the visitor began ringing up, followed by the pair until they were lost from sight.

#### EGGSHELL ANALYSIS

The addled eggs were removed from the nest 1 July. We removed the contents and dried the shells. Dr. Stanley Temple measured and weighed the shells, and calculated the eggshell thickness index (Ratcliffe 1970). The indices were 1.86 and 1.96 which are, to quote Dr. Temple, "disgustingly normal" when compared with pre-DDT-era norms (Anderson 1970). The shells were added to the collection of the Milwaukee Public Museum and the contents are awaiting analysis.

#### COMMENTARY

We were very pleased and encouraged by the success of this year's nesting season, in spite of Sojourner's death. McArthur proved to be a model parent this season, and we hope to see him back to nest in Milwaukee for many years to come.

We feel that the extension added to the nest box worked very well in keeping the chicks safe until fledging, while providing ample space for exercise, free access by the adults, and minimizing the need for human intervention.

We would like to thank the many individuals and organizations that made this site a continuing success:

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